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REMARKS

Support for the new claims can be found throughout the specification. A marked up version of the new claims can be found in attached Appendix A.

In view of the foregoing amendments and remarks, Applicants believe that the present application is in condition for early examination, and action toward that end is respectfully requested. If the Examiner believes that a telephone interview would expedite the examination of this application, the Examiner is requested to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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APPENDIX A  
NEW CLAIMS

2. (New) A microfluidic device, comprising:

a body structure having at least a first microscale channel disposed therein;

a capillary element having first and second ends and a capillary channel disposed therethrough, the first end of the capillary element being attached to the body structure whereby the capillary channel is in fluid communication with the at least first microscale channel; and

a conductive layer deposited on at least a portion of a surface of the capillary element, the conductive layer extending up to the second end of the capillary element.

3. (New) The microfluidic device of claim 2, wherein the conductive layer comprises a conductive stripe along a portion of a length of the capillary element.

4. (New) The microfluidic device of claim 2, wherein the conductive layer comprises a continuous layer around a circumference of the capillary element.

5. (New) The microfluidic device of claim 2, wherein the capillary element is attached to the body structure by the first end being inserted into an aperture in the body structure.

6. (New) The microfluidic device of claim 5, wherein the conductive layer is deposited along a portion of a length of the capillary element that extends to a point proximal to but not up to the first end of the capillary element.

7. (New) The microfluidic device of claim 2, wherein the capillary element is substantially rectangular.

8. (New) The microfluidic device of claim 7, wherein the capillary channel in the capillary element is substantially colinear with the at least one microscale channel disposed in the body structure.

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9. (New) The microfluidic device of claim 7, wherein the capillary channel in the capillary element is substantially perpendicular to the at least one microscale channel disposed in the body structure.